

WHAT IS CLAIMED IS:

1. An optical fiber comprising:

a core region having a first refractive index with a UV photosensitivity;

5 an inner cladding region surrounding said core region and having a second refractive index lower than said first refractive index with a UV photosensitivity; and

10 an outer cladding region surrounding said inner cladding region and having a third refractive index lower than said first refractive index;

wherein said UV photosensitivity in said inner cladding region has a deviation of  $\pm 10\%$  or less.

15 2. An optical fiber according to claim 1, wherein the difference between an average value of UV photosensitivity in said core region and an average value of UV photosensitivity in said inner cladding region is 10% or less.

20 3. An optical fiber according to claim 1, wherein the deviation of UV photosensitivity over both of said core region and said inner cladding region is  $\pm 10\%$  or less.

4. An optical fiber according to claim 1, wherein the deviation of UV photosensitivity over both of said core region and said inner cladding region is  $\pm 5\%$  or less.

25 5. A fiber grating device comprising the optical fiber according to claim 1, said optical fiber having a refractive index modulation formed in a predetermined area

along a longitudinal direction thereof.

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